

**AMENDMENTS TO THE CLAIMS**

1. – 26. (canceled)

27. A system for organizing without central administration a network of non-trusting computing devices so that the computing devices can securely share network resources and communicate with an expected quality of service, comprising:

a recipient computing device; and

a sending computing device that sends a circuit establishment request thereby causing a communications circuit to be established between the sending computing device and the recipient computing device such that a route is dynamically calculated from the sending computing device to the recipient computing device via a set of intermediate computing devices without consulting a central administration computing device, the circuit establishment request having an indication of a desired quality of service that is enforced by each computing device in the set of intermediate computing devices.

28. The system of claim 27 wherein the sending computing device sends a packet to the recipient computing device using a hierarchical dynamic routing protocol.

29. The system of claim 28 wherein the dynamic routing protocol propagates quality of service information to each intermediate computing device.

30. The system of claim 28 wherein the hierarchical dynamic routing protocol employs a cryptographic method to encrypt communications.

31. The system of claim 28 wherein the sending computing device sends a document that is used by the intermediate computing devices to make decisions.

32. The system of claim 31 wherein the document describes a quality of service.
33. The system of claim 32 wherein the document further describes rights and delegations of rights for usage of the network.
34. The system of claim 31 wherein the document describes a delegation of a permission.
35. The system of claim 34 wherein the delegation of the permission enables a computing device to make a data movement decision.
36. The system of claim 28 wherein the hierarchical dynamic routing protocol can use either a reliable or unreliable underlying communications protocol.
37. The system of claim 27 wherein the network is organized as a hierarchical mesh network.
38. The system of claim 37 wherein each computing device of the hierarchical mesh network is identified by a name comprising a set of identifiers separated by a separator.
39. The system of claim 38 wherein the identifiers are organized in the name from specific to general.
40. The system of claim 37 wherein the hierarchical mesh network includes a meta-node.
41. The system of claim 40 wherein the meta-node indicates a computing device and a network of computing devices, the indicated computing device and network of computing devices representing peers in a hierarchy.